

# CLAIMS

1. A peroxidase enzyme derived from Geotrichum candidum Dec 1 (FERM BP-7033), which has the following properties:
  - a) a property to degrade and decolorize dyes;
  - b) a molecular weight of 60 kDa, by the molecular weight assay using SDS-PAGE;
  - c) a molecular weight of 55 kDa, by the molecular weight assay using gel filtration; and
  - d) pI (isoelectric point) 3.8, by the assay by isoelectric focusing.
2. An enzyme according to claim 1, having the amino acid sequence of SQ ID NO. 7 in the sequence listing.
3. A gene encoding the enzyme according to claim 1, having the DNA sequence of SQ ID NO. 8 in the sequence listing.
4. An expression plasmid vector comprising the coding gene according to claim 3.
5. A microorganism (FERM BP-7032) transfected with the expression plasmid vector according to claim 4.
6. A method for degrading and decolorizing dyes, comprising using an enzyme according to claim 1 or a microorganism according to claim 5 for degrading and decolorizing dyes.